REMARKS

I. Status:

The present submission is made in response to the Office Action dated January 19, 2010, wherein applicant's previous submission, entered November 2, 2009 in conjunction with a Request for Continued Examination, was deemed *bona fide*, but not fully responsive to the Office Action dated May 6, 2009, that was then outstanding.

In the reply entered November 2, 2009, applicant presented amendments to the specification and claims and remarks addressing the outstanding Office Action. Claims 7 and 15 were amended, and new claims 17-59 were presented. Claims 1-6 had previously been cancelled. Thus, claims 7-59 remain in the application.

Applicants' November 2 submission was made in conjunction with a Request for Continued Examination and further included a Supplemental Information Disclosure Statement for consideration pursuant to 37 CFR 1.97(b)(4). Said November 2 submission is incorporated herein by reference in its entirety.

II. The Present Office Action:

The Examiner has indicated that applicant's November 2 response was not fully responsive to the prior Office Action, it being alleged that the applicant did not point out the specific distinctions that render the newly presented claims (i.e., claims 17-59) patentable over the applied references. In response, applicant respectfully points to: (i) the discussion of the subject matter of new claims 17-59

set forth at pages 30-31 of the November 2, 2009 submission and (ii) Section IV: Discussion of New Claims at page 50, setting forth particular features delineated by new claims 17-59 that distinguish these claims from the cited combination of Gringeri and Baker. That discussion includes language pointing out the use of feedback from the client-side buffer to adjust the data transmission rate through the network connection. Applicant respectfully submits that said remarks in the November 2, 2009 submission in fact provided what was allegedly absent.

Nevertheless, to expedite prosecution of this application, applicant presents hereinbelow additional discussion of the distinctions between the subject matter of claims 17-59, which were newly presented in the November 2 submission, and the art applied, i.e., the cited combination of Gringeri and Baker.

III. Claims 7-16 are patentable over the combination of Gringeri and Baker:

The Office Action dated May 6, 2009 included a rejection of claims 7-16 under 35 USC 103(a) as being obvious over US Patent No. 6,233,226 to Gringeri et al. in view of US Patent No. 6,449,719 to Baker.

Applicant's November 2, 2009 response included claim amendments and remarks addressing this rejection. Applicant confirms the position set forth in that response, which is specifically incorporated herein by reference thereto. In view of the remarks and the claim amendments submitted in the November 2nd response, it is respectfully submitted that claims 7-16 are now allowable. Reconsideration of the rejection of claims 7-16 under 35 USC 103(a) as being obvious over Gringeri et al. in view of Baker is respectfully requested.

IV. Claims 17-59 are patentable over the combination of Gringeri and Baker:

(a) Independent claims 17, 32, and 45.

Claims 17-59 include independent claims 17, 32, and 45, respectively directed to:

- a method for distributing streaming media via a data communications medium such as the Internet to at least one user system of at least one user;
- a streaming media server providing a buffering system for distributing streaming media via a data communications medium such as the Internet to at least one user system of at least one user; and
- a machine-readable medium on which there has been recorded a computer program for use in operating a server for distributing streaming media comprising a plurality of sequential media data elements via a data communications medium such as the Internet to at least one user system of at least one user.

Claims 18-31, 33-44, and 46-59 depend from claims 17, 32, and 45, respectively.

As set forth in applicant's November 2 submission at page 31, added claims 17-59 find support in the original specification, particularly at paragraphs [0002], [0007], [0008], [0021], [0022], [0027], [0029], [0032], [0041], [0042], [0044], and [0047].

Applicant submits that the same arguments set forth in the November 2, 2009 response with respect to the rejection of claims 7-16 over Gringeri et al. in view of Baker also predicate the patentability of new claims 17-59.

Applicant concurs with the Examiner's statement in the May 6, 2009 Office Action that

> Gringeri does not explicitly teach said transmission means is configured to receive notification from said user computer of the level of filling of said user buffer and to cause said server to cease sending said data elements while said user buffer is full and thereafter to resume sending data elements.
>
> [May 6, 2009 Office Action at 3]

Applicant further maintains that, having failed to disclose receipt of notification from the user computer of the buffer filling level, Gringeri also cannot be read to teach the transmission of data at different rates, according to the buffer filling level, as required by each of claims 17-59. Either deficiency is sufficient to preclude a novelty rejection of claims 17-59 over Gringeri.

The Examiner has relied on Baker only for the alleged disclosure of a system wherein a user computer notifies a server of the filling level of a user buffer. Clearly, Baker thus falls short of disclosing the subject matter of any of claims 17-59.

Consequently, neither Gringeri et al. nor Baker anticipates the subject matter of claims 17-59.

Applicant further maintains that claims 17-59 are not obvious over the Gringeri and Baker references, whether taken singly or in combination, as the requirements for an obviousness rejection delineated by *Graham*, and affirmed recently by the Supreme Court in *KSR*, are not satisfied.

In accordance with the first inquiry mandated under *Graham* (the scope and content of the prior art), applicant's November 2 response sets forth a detailed discussion of the disclosures of Gringeri and Baker at pages 33-36 and 37, respectively. The second *Graham* inquiry (ascertaining the difference between the claimed invention and the prior art) is addressed at pages 38-42. The third *Graham* inquiry (resolving the level of ordinary skill in the pertinent art) is addressed at pages 42-48. Applicant maintains that these discussions apply with equal force both to previous claims 7-16 and to newly presented claims 17-59.

Specifically, the method of claim 15, which is implemented using the server of claim 32 and is implicit in the execution of the program stored in the computer storage medium of claim 45, shares fundamental features with the system of claim 7 and the method of claim 15. These fundamental features include the use of plural data network transmission rates during the execution of the method. For example, attention is respectfully directed to claim 15, features (d), (g), and (h). These features respectively call for a user's buffer: (i) to be filled initially at a rate as fast as the network connection to the user allows; (ii) thereafter to be replenished at a rate as fast as the connection to the user allows, as long as the buffer <u>is not</u> full; and (iii) thereafter to be replenished at a rate approximately equal to the playback rate, as long as the buffer <u>is</u> full. Claim 17 likewise calls for

multiple transmission rates, reciting the initial filling of the user buffer at a rate more rapid than the rate at which streaming media is played out and thereafter the filling of the buffer at about the playback rate if the buffer is full and at a more rapid rate if the buffer is not full.

Claims 32 and 45 also contain provisions directed to different data transmission rates for the initial buffer filling and the replenishment of the buffer at different rates, depending on whether the buffer is or is not full. These provisions are comparable to those provided by claim 17.

Applicant has provided extensive argument in the November 2 submission that the combination of Gringeri and Baker does not contemplate any system or method wherein the transmission rate used to send media data to a user is adjusted in accordance with the filling state of a user buffer. As noted in the November 2 submission (*see* page 34 et seq.), Gringeri relies on an asynchronous transmission mode protocol (ATM) for its video transmission. Of the four types of ATM services reviewed (CBR, VBR, UBR, and ABR), only constant bit rate (CBR) and variable bit rate (VBR) were deemed to provide transmission within acceptable limits on maximum delay and delay variation. However, neither CBR nor VBR provides any mechanism for "feedback" to a source distribution server pertaining to the state of the user receive buffer. Absent the availability of direct feedback in the CBR and VBR modes, Gringeri instead opted for a modeling approach that is viable only in a system with guaranteed quality of service.

By way of contrast, the approach inherent in applicant's new claims 17-59, like that of previous claims 7-16, relies on feedback indicative of the state of the user buffer to adaptively adjust the data transmission rate.

Recognizing Gringeri's failure to disclose or suggest the feedback-based flow control recited in claims 7-16 (included as well as new claims 17-59), the Examiner further pointed to Baker, which is focused on encryption and content protection. Baker's disclosure is made in the context of a UDP (User Datagram Protocol) / IP protocol, which provides for transmission of data packets under the server's control, but which does not entail any test whether the packets are received, or whether they are received in correct sequence. Thus freed of these responsibilities, UDP/IP can function with very low networking overhead. Flow rate is modulated by software in the application layer, and transmission is slowed or stopped by the server at will. Thus, Baker fails to address how throughput is maintained over connections of variable quality without pauses, dropouts, lost frames, etc.

The Examiner has posited that a skilled person would be motivated to implement a feedback approach disclosed by Baker within the Gringeri protocol. Applicant respectfully submits that in the ATM environment, the CBR and VBR protocols inherently make no provision by which such feedback might be implemented. Although the ABR protocol does contemplate feedback capability, it is rejected by Gringeri as not providing acceptable bounds for maximum delay and delay variation for the uses intended and contemplated. It is submitted that Gringeri thus consciously and intentionally teaches away from the only ATM protocol that contemplates feedback control. Applicant respectfully submits that an invention cannot be regarded as obvious over a combination of references where one reference teaches away from the proposed combination, as in the

present instance. *In re Rudko*, Civ. App. No. 98-1505, slip op. at 5-6 (Fed. Cir. May 14, 1999) (unpublished).

Furthermore, applicant submits that claims 17-59 are patentable over Gringeri and Baker in view of analysis under the third factor of the *Graham* test. Even if, *arguendo*, Gringeri and Baker could properly be combined as motivating a skilled person to seek a network communication system in which the transmission rate is modified, based on the status of the user's receive buffer, the *Graham* test requires determination whether carrying out the reconstruction required is within the capability of the person with an ordinary level of skill in the pertinent art.

In his November 2 submission, applicant has contended that a person having ordinary skill in the network communications art, as set forth at page 43 of the November 2 submission, would not be capable of modifying Gringeri and Baker in the manner required to reach the subject matter of claims 7-16. It is respectfully submitted that the same considerations apply with equal force to claims 17-59.

For the sake of brevity, the extensive arguments set forth at pages 43-48 of the November 2 submission addressing the inability of an ordinarily skilled artisan to carry out the required modifications to reach the subject matter of either claims 7-16 or 17-59 and the lack of any disclosure or other basis that would render such changes desirable will not be fully repeated here, but are incorporated by reference.

In short summary, ATM protocols do not provide for feedback from the client side in any manner usable for reliable delivery of streaming video. Thus, to

implement Baker-style feedback in the context of Gringeri, as required to reach the subject matter of either claims 7-16 or 17-59, would necessitate development going well outside of the capabilities provided by ATM. It would require either a higher level network protocol not extant in ATM or significant applications programming atop ATM that would set a channel between client and server for flow control messages. Then, the disclosed mechanisms of Gringeri would have to be modified, in a way unspecified by the Examiner, to effect the claimed data rate adjustments. Such a method is altogether different from simply starting and stopping UDP transmissions, as in Baker.

Applicant also submits that the combination of Gringeri and Baker fails to enable what the Examiner has proposed. At best, additional development and different protocols not provided by the references singly or in combination would be required, providing yet another basis on which the proposed combination is improper. See *In re Kumar,* 418 F.3d 1361, 1369; 76 USPQ2d 1048, 1052-53 (Fed. Cir. 2005).

(b) Dependent claims 18-31, 33-44, and 46-59.

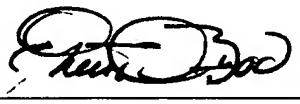
The remarks set forth above, which are submitted to patentably differentiate base claims 17, 32, and 45 over the art cited, apply with equal force to each of claims 18-31, 33-44, and 46-59, which are each dependent claims that incorporate each and every limitation of their respective base claims. If the independent claim is nonobvious, "then any claim depending therefrom is nonobvious". MPEP 2143.03.

Consequently, it is submitted that claims 17-59 are allowable over the art of record.

CONCLUSION

In view of the foregoing, it is submitted that present claims 7-16, and new claims 17-59 are patentable over the cited prior art and are in allowable condition. Accordingly, allowance of claims 7-59 is earnestly solicited.

Respectfully submitted,
Harold Edward Price

By: 

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